

Work Order ID 95399

95399

Page 1

January-09-13 12:54:40 PM

Item ID: D3027-7

Accept

N900040100

Setup

Start

NS1

Revision ID:

Stop

NS2

Item Name: Clip

Start Date: 1/14/13 Start Qty: 12.00 *12*

Cust Item ID:

Required Date: 1/25/13 Req'd Qty: 12.00 *12*

Customer:

Reference:

Approvals: Process Plan: MLJ

Date: 13-01-10 Tooling:

Date:

Run

Start

NR1

QC:

Date:

SPC (Y/N):

Date:

Stop

NR2

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D3027	Rev B								
100		0.00							
100	FLOW WATER JET								
Waterjet	Memo	0.00							
FLOW CNC Waterjet	1-Cut as per Dwg D3027 ***NOTE GRAIN DIRECTION*****								
2024 .050	Dwg Rev: B Prog Rev: B								
	2-Deburr if necessary								
110	QC2- Inspect parts off machine FAI/FAIB	0.00							
110	Memo	0.00							
QC									
Quality Control									

12 0 JM 13-2-8

Jm 13-2-8

NCR: Yes / No

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order: _____			DISPOSITION		AGAINST DEPARTMENT/PROCESS					
Part No. _____	Work Order:	NCR No. _____	Rework	Skid-tube	Crosstube	Water Jet	Engineering			
			Scrap	Machining	Small Fab	Prod. Eng. Coor.	Quality			
			Use-as-is	Thermoforming	Finishing	Rec/Store/Packaging	Other			
			Work Order Update	Large Fab	Composite	Supplier				
Root Cause	Date	Step	Qty	Description of work order update or Non-conformance		Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Doc/Data										
Equip/Tooling										
Operator										
Material										
Setup										
Other										
Process										
Supplier										
Training										
Unapproved										
FAULT CATEGORY										
Landing Gear				General						
				Bending	Bend	Grain	Ovalized	Pressure/Forced		
	Centre Not Concentric to O/S	BOM/Route	Hardware	Over/Under tolerance	Temperature/Cure					
	Cracks	Broken/Damaged	Inspection Incomplete	Part Incorrect	Weld					
	Crushed/Crimped.	Burrs	Instructions Incomplete/Unclear	Part Lost/Missing	Wrong Stock Pulled					
	Cuffs	Contamination	Maintenance	Part Moved						
	Heat Treat	Countersink	Mislabeled	Positioned Wrong						
	Inspection Strip in Tube	Cut Too Short	Misread	Power Loss/Surge						
	Ripples in Bend	Drill Holes	Offset		Other					
	Torque Waves in Extrusion	Drawing	Out of Calibration							
	Turning Sequence	Finish	Out of Sequence							
	Wave/Twist in Tube	Folio	Outside Dimensions							

Work Order ID 95399***95399***

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January-09-13 12:54:40 PM

Item ID: D3027-7

Accept

N900040100

Setup

Start

NS1

Revision ID:

Stop

NS2

Item Name: Clip

Start Date: 1/14/13

Start Qty: 12.00

12

Cust Item ID:

Required Date: 1/25/13

Req'd Qty: 12.00

12

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run

Start

NR1

QC:

Date:

SPC (Y/N):

Date:

Stop

NR2

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
120 *120* QC	QC8- Inspect parts - second check Memo	0.00 0.00	SM ^P 1328			12			
Quality Control									
130 *130* Brake NC	NC BRAKE Memo	0.00 0.00				12			81 13/02/13
Brake NC	Deburr if necessary								
	Form as per Dwg D3027								
140 *140* QC	QC5- Inspect part completeness to step on W/O Memo	0.00 0.00	0AS 15 9-89			12			
Quality Control			13.2.13						

NCR: Yes / No

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order: _____			DISPOSITION		AGAINST DEPARTMENT/PROCESS					
Part No. _____	Work Order:	Part No. _____	Rework <input type="checkbox"/>	Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>			
NCR No. _____	Part No. _____	NCR No. _____	Scrap <input type="checkbox"/>	Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coor. <input type="checkbox"/>	Quality <input type="checkbox"/>			
			Use-as-is <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>			
			Work Order Update <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>				
Root Cause	Date	Step	Qty	Description of work order update or Non-conformance		Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Doc/Data										
Equip/Tooling										
Operator										
Material										
Setup										
Other										
Process										
Supplier										
Training										
Unapproved										
FAULT CATEGORY										
Landing Gear				General						
Bending				Bend <input type="checkbox"/>	General		Grain <input type="checkbox"/>	Ovalized <input type="checkbox"/>	Pressure/Forced <input type="checkbox"/>	
Centre Not Concentric to O/S				BOM/Route <input type="checkbox"/>			Hardware <input type="checkbox"/>	Over/Under tolerance <input type="checkbox"/>	Temperature/Cure <input type="checkbox"/>	
Cracks				Broken/Damaged <input type="checkbox"/>			Inspection Incomplete <input type="checkbox"/>	Part Incorrect <input type="checkbox"/>	Weld <input type="checkbox"/>	
Crushed/Crimped.				Burrs <input type="checkbox"/>			Instructions Incomplete/Unclear <input type="checkbox"/>	Part Lost/Missing <input type="checkbox"/>	Wrong Stock Pulled <input type="checkbox"/>	
Cuffs				Contamination <input type="checkbox"/>			Maintenance <input type="checkbox"/>	Part Moved <input type="checkbox"/>		
Heat Treat				Countersink <input type="checkbox"/>			Mislabeled <input type="checkbox"/>	Positioned Wrong <input type="checkbox"/>		
Inspection Strip in Tube				Cut Too Short <input type="checkbox"/>			Misread <input type="checkbox"/>	Power Loss/Surge <input type="checkbox"/>		
Ripples in Bend				Drill Holes <input type="checkbox"/>			Offset <input type="checkbox"/>	Other <input type="checkbox"/>		
Torque Waves in Extrusion				Drawing <input type="checkbox"/>			Out of Calibration <input type="checkbox"/>			
Turning Sequence				Finish <input type="checkbox"/>			Out of Sequence <input type="checkbox"/>			
Wave/Twist in Tube				Folio <input type="checkbox"/>			Outside Dimensions <input type="checkbox"/>			

Work Order ID 95399

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Page 3

January-09-13 12:54:40 PM

Item ID: D3027-7

Accept

N900040100

Setup Start

NS1

Revision ID:

Stop

NS2

Item Name: Clip

Start Date: 1/14/13

Start Qty: 12.00 *12*

Cust Item ID:

Required Date: 1/25/13

Req'd Qty: 12.00 *12*

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start

NR1

QC:

Date:

SPC (Y/N):

Date:

Stop

NR2

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

150

150

HandFinish

Hand Finishing

Chemical Conversion Coat per QSI005 4.1

0.00

12 26 13-2-29

160

160

QC

Quality Control

QC3- Inspect Part Finish

0.00

DAS
15
9-09

13-2-20

12

170

170

Packaging

Packaging

Identify as per dwg & Stock Location: 81024 0.00

Memo

0.00

12

80
13-2-20

NCR: Yes / No

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order: _____			DISPOSITION		AGAINST DEPARTMENT/PROCESS								
			Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update <input type="checkbox"/>	Skid-tube <input type="checkbox"/> Machining <input type="checkbox"/> Thermoforming <input type="checkbox"/> Large Fab <input type="checkbox"/>	Crosstube <input type="checkbox"/> Small Fab <input type="checkbox"/> Finishing <input type="checkbox"/> Composite <input type="checkbox"/>	Water Jet <input type="checkbox"/> Prod. Eng. Coor. <input type="checkbox"/> Rec/Store/Packaging <input type="checkbox"/> Supplier <input type="checkbox"/>	Engineering <input type="checkbox"/> Quality <input type="checkbox"/> Other <input type="checkbox"/>						
Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector				
Doc/Data <input type="checkbox"/> Equip/Tooling <input type="checkbox"/> Operator <input type="checkbox"/> Material <input type="checkbox"/> Setup <input type="checkbox"/> Other <input type="checkbox"/> Process <input type="checkbox"/> Supplier <input type="checkbox"/> Training <input type="checkbox"/> Unapproved <input type="checkbox"/>													
FAULT CATEGORY													
Landing Gear <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric to O/S <input type="checkbox"/> Cracks <input type="checkbox"/> Crushed/Crimped. <input type="checkbox"/> Cuffs <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Ripples in Bend <input type="checkbox"/> Torque Waves in Extrusion <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube				General <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damaged <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drill Holes <input type="checkbox"/> Drawing <input type="checkbox"/> Finish <input type="checkbox"/> Folio <input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Maintenance <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Offset <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence <input type="checkbox"/> Outside Dimensions						<input type="checkbox"/> Ovalized <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge <input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled <input type="checkbox"/> Other			

Work Order ID 95399

95399

Page 4

January-09-13 12:54:40 PM

Item ID: D3027-7

Accept

N900040100

Setup

Start

NS1

Revision ID:

Stop

NS2

Item Name: Clip

Start Date: 1/14/13 Start Qty: 12.00

12

Cust Item ID:

Required Date: 1/25/13 Req'd Qty: 12.00

12

Customer:

Reference:

Approvals: Process Plan:

Date: Tooling:

Date:

Run

Start

NR1

QC:

Date: SPC (Y/N):

Date:

Stop

NR2

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

180

QC21- Final Inspection - Work Order Release

0.00

13/2/2013

180

QC

Quality Control

Memo

0.00

13-02-20

NCR: Yes / No

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order: _____		DISPOSITION		AGAINST DEPARTMENT/PROCESS						
Part No. _____		Rework <input type="checkbox"/>	Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>				
NCR No. _____		Scrap <input type="checkbox"/>	Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coor. <input type="checkbox"/>	Quality <input type="checkbox"/>				
		Use-as-is <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>				
		Work Order Update <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>					
Root Cause	Date	Step	Qty	Description of work order update or Non-conformance		Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Doc/Data										
Equip/Tooling										
Operator										
Material										
Setup										
Other										
Process										
Supplier										
Training										
Unapproved										
FAULT CATEGORY										
Landing Gear	General									
	Bending <input type="checkbox"/>	Bend <input type="checkbox"/>	Grain <input type="checkbox"/>	Ovalized <input type="checkbox"/>						
	Centre Not Concentric to O/S <input type="checkbox"/>	BOM/Route <input type="checkbox"/>	Hardware <input type="checkbox"/>	Pressure/Forced <input type="checkbox"/>						
	Cracks <input type="checkbox"/>	Broken/Damaged <input type="checkbox"/>	Inspection Incomplete <input type="checkbox"/>	Temperature/Cure <input type="checkbox"/>						
	Crushed/Crimped. <input type="checkbox"/>	Burrs <input type="checkbox"/>	Instructions Incomplete/Unclear <input type="checkbox"/>	Part Incorrect <input type="checkbox"/>						
	Cuffs <input type="checkbox"/>	Contamination <input type="checkbox"/>	Maintenance <input type="checkbox"/>	Part Lost/Missing <input type="checkbox"/>						
	Heat Treat <input type="checkbox"/>	Countersink <input type="checkbox"/>	Mislabeled <input type="checkbox"/>	Part Moved <input type="checkbox"/>						
	Inspection Strip in Tube <input type="checkbox"/>	Cut Too Short <input type="checkbox"/>	Misread <input type="checkbox"/>	Positioned Wrong <input type="checkbox"/>						
	Ripples in Bend <input type="checkbox"/>	Drill Holes <input type="checkbox"/>	Offset <input type="checkbox"/>	Power Loss/Surge <input type="checkbox"/>						
	Torque Waves in Extrusion <input type="checkbox"/>	Drawing <input type="checkbox"/>	Out of Calibration <input type="checkbox"/>	<input type="checkbox"/>						
	Turning Sequence <input type="checkbox"/>	Finish <input type="checkbox"/>	Out of Sequence <input type="checkbox"/>	<input type="checkbox"/>						
	Wave/Twist in Tube <input type="checkbox"/>	Folio <input type="checkbox"/>	Outside Dimensions <input type="checkbox"/>	<input type="checkbox"/>						
				<input type="checkbox"/>						
				<input type="checkbox"/>						
				<input type="checkbox"/>						

Picklist Print

January-09-13 12:54:40 PM

Page 1

Work Order ID: 95399

Parent Item: D3027-7

Parent Item Name: Clip

Start Date: 1/14/13

Required Date: 1/25/13

Start Qty: 12.00

Required Qty: 12.00

Comments: IPP C05.10.07Added forming step and Issue P/OKJ/JLM
IPP Rev:B Now on WaterJet 08-12-08 JLM Verified By:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M2024T3S.050 2024-T3 .050 sheet		Purchased	No			100	sf	250.8968	0.024	0.3031584 04			JM3-28

Location	Loc Qty	Loc Code
MAT022	250.8968408	
117684	22.4	
121216	91.2968408	
121889	137.2	121889

NCR: Yes / No

DQA: Date:

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

DART AEROSPACE LTD	Work Order:	95399
Description: Clip	Part Number:	D3027-7
Inspection Dwg: D3027	Rev: B	Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

X First Article Prototype

Measured by:	JM	Audited by:	SMS	Prototype Approval:	N/A
Date:	13-2-8	Date:	13-2-8	Date:	N/A

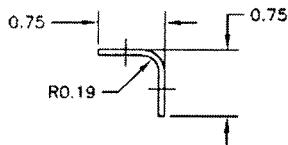
Rev	Date	Change	Revised by	Approved
A	05.04.26	New Issue P/O D350-689-013	KJ/JLM	
B	06.03.09	Dwg Rev updated; Dimensions revised	KJ/JLM	<i>[Signature]</i>

DART

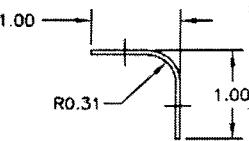
DESIGN RF	DRAWN BY CP	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>TH</i>	APPROVED <i>TH</i>	DRAWING NO. D3027	REV. B SHEET 1 OF 2
DATE 05.09.20		TITLE CLIP	SCALE 1:2
A	01.05.18	NEW ISSUE	
B	05.09.20	REMOVE HOLES FROM -7	

RELEASED

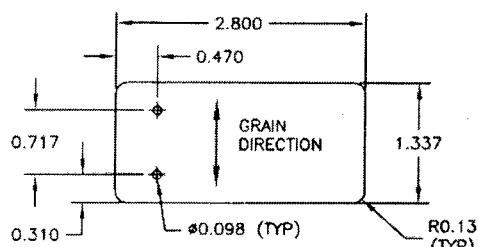
05-10-03 *TH*



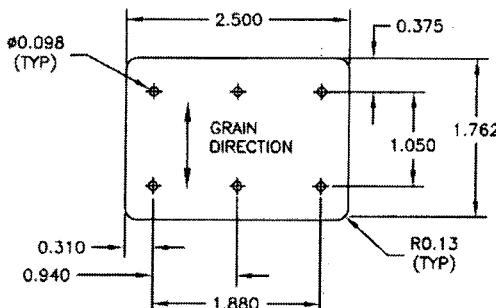
D3027-1 BEND DETAIL



D3027-3 BEND DETAIL



D3027-1 FLAT PATTERN
(0.063" SHEET)



D3027-3 FLAT PATTERN
(0.050" SHEET)

NOTES:

- 1) BREAK ALL UNMARKED SHARP CORNER 0.010 TO 0.020
- 2) MATERIAL: 2024-T3 (QQ-A-250/4)
- 3) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
- 4) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED

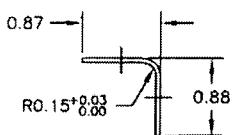
13-01-10
95399MLS



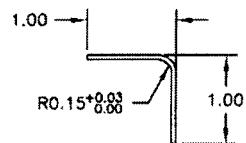
DESIGN RF	DRAWN BY CP	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>AA</i>	APPROVED <i>AA</i>	DRAWING NO. D3027	REV. B SHEET 2 OF 2
DATE 05.09.20		TITLE CLIP	SCALE 1:2

RELEASED

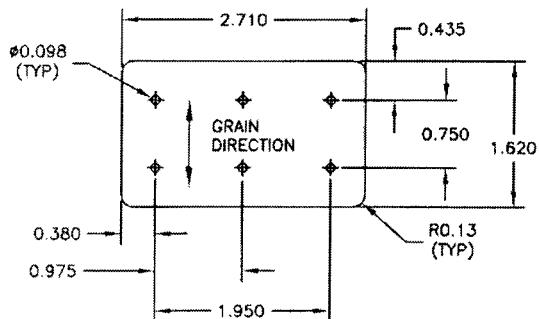
05.10.20 *AA*



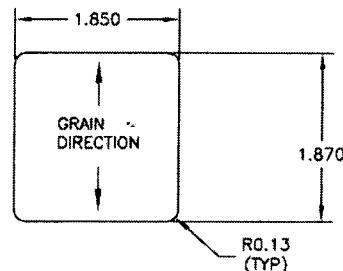
D3027-5 BEND DETAIL



D3027-7 BEND DETAIL



D3027-5 FLAT PATTERN
(0.050" SHEET)



D3027-7 FLAT PATTERN
(0.050" SHEET)

NOTES:

- 1) BREAK ALL UNMARKED SHARP CORNER 0.010 TO 0.020
- 2) MATERIAL: 2024-T3 (QQ-A-250/4)
- 3) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
- 4) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED

66359